IN THE CLAIMS

Please amend claims 15 and 43 as follows:

1-14 (Canceled)

15. (Currently Amended) A system for detecting a semantic temporal event included in unprocessed video or audio data of an event from at least one data source, said system comprising:

a knowledge-based modeling unit for generating multiple-layer models for identifying said semantic temporal event;

a storage mechanism for storing said multiple-layer models;

an observation collection unit for extracting, from said unprocessed video or audio data from the at least one data source, temporal observations according to said multiple-layer models for the semantic temporal event; and

a temporal event detection unit for detecting one or more occurrences of the semantic temporal event based on said temporal observations and said multiple-layer models, wherein the semantic temporal event occurs during the event, [[and]] the event has a start time and an end time, and the detected one or more occurrences of the semantic temporal event are used to facilitate selective delivery of the unprocessed video or audio data.

16. (Previously Presented) The system according to claim 15, further including:

an event characterization unit for characterizing said occurrences of the semantic temporal event, detected by said temporal event detector, to produce a characterization for the occurrences of the semantic temporal event.

17. (Previously Presented) The system according to claim 16, further including:

a storage mechanism for storing the characterization produced by said event characterization unit;

an event prediction unit for performing temporal event prediction based on said characterization;

an event model updating unit for modifying said multiple-layer models based on said characterization; and

an event simulation unit for simulating parts of said semantic temporal event according to said characterization.

18 – 29 (Canceled).

30. (Previously Presented) The system according to claim 15, wherein the event is a sports event.

31. (Previously Presented) The system according to claim 30, wherein said sports event includes a soccer game.

32. (Previously Presented) The system according to claim 15, wherein said multiple-layer models include a high level domain-specific knowledge model and a dynamic hierarchical event model.

33. (Previously Presented) The system according to claim 32, wherein said high level domain-specific knowledge model includes rules of a sports game.

34. (Previously Presented) The system according to claim 32, wherein said dynamic hierarchical event model includes a hierarchical decision tree.

35. (Previously Presented) The system according to claim 32, wherein said dynamic

hierarchical event model includes an entity-relationship-diagram.

36. (Previously Presented) The system according to claim 15, wherein said at least one data source is selected from the group consisting of a camera, a microwave sensor, a sound recorder, and an input data stream.

37. (Canceled)

38. (Previously Presented) The system according to claim 15, wherein said at least one data source includes a data stream sent through a network connection.

39. (Previously Presented) The system according to claim 38 wherein the data stream is a video stream with synchronized audio track.

40. (Previously Presented) The system according to claim 15, wherein the observation collection unit is simultaneously connected to more than one data source.

41. (Previously Presented) The system according to claim 15, wherein said temporal event detection unit includes an integration unit, a detection unit, and a fusion unit, and said integration unit combines a plurality of observation streams from a plurality of data sources, the detection unit detects a same event using a plurality of detection means to produce a plurality of detection results, and said fusion unit fuses the plurality of detection results to produce a single detection decision.

42. (Previously Presented) The system according to claim 16, further including:

an event storage, in which detected occurrences of temporal semantic events are stored;

an events statistics extractor to compute statistical information about the detected occurrences; and

an event statistics storage unit to store the statistical information.

43. (Currently Amended) A system for detecting a semantic temporal event included in unprocessed video or audio data of an event from at least one data source, said system comprising:

a knowledge-based modeling unit for generating multiple-layer models for said semantic temporal event;

a storage mechanism for storing said multiple-layer models;

an observation collection unit for extracting, from said unprocessed video or audio data from said at least one data source, temporal observations according to said multiple-layer models for the semantic temporal event;

a temporal event detection unit for detecting one or more occurrences of the semantic temporal event included in the unprocessed video or audio data based on said temporal observations and said multiple-layer models;

an event characterization unit for characterizing said occurrences of the semantic temporal event, detected by said temporal event detector, to produce a characterization for the occurrences of the semantic temporal event;

a storage mechanism for storing the characterization produced by said event characterization unit;

an event prediction unit for performing temporal event prediction based on said characterization;

an event model updating unit for modifying said multiple-layer models based on said characterization; and

an event simulation unit for simulating parts of said semantic temporal event according to

said characterization, wherein the semantic temporal event occurs during the event, [[and]] the event has a start time and an end time, and said characterization and the detected one or more occurrences of the semantic temporal event are used to facilitate selective delivery of the unprocessed video or audio data.

44. (Previously Presented) The system according to claim 43, wherein the event is a sports event.

45. (Previously Presented) The system according to claim 44, wherein said sports event includes a soccer game.

46. (Previously Presented) The system according to claim 43, wherein said multiple-layer models include a high level domain-specific knowledge model and a dynamic hierarchical event model.

47. (Previously Presented) The system according to claim 46, wherein said high level domain-specific knowledge model includes rules of a sports game.

48. (Previously Presented) The system according to claim 46, wherein said dynamic hierarchical event model includes a hierarchical decision tree.

49. (Previously Presented) The system according to claim 46, wherein said dynamic hierarchical event model includes an entity-relationship-diagram.

50. (Previously Presented) The system according to claim 43, wherein said at least one data source is selected from the group consisting of a camera, a microwave sensor, a sound recorder, and an input data stream.

51. (Canceled)

52. (Previously Presented) The system according to claim 43, wherein said at least one data source includes a data stream sent through a network connection.

53. (Previously Presented) The system according to claim 52, wherein the data stream is a video stream with synchronized audio track.

54. (Previously Presented) The system according to claim 43, wherein the observation collection unit is simultaneously connected to more than one data source.

55. (Previously Presented) The system according to claim 43, wherein said temporal event detection unit includes an integration unit, a detection unit, and a fusion unit, and said integration unit combines a plurality of observation streams from a plurality of data sources, the detection unit detects a same event using a plurality of detection means to produce a plurality of detection results, and said fusion unit fuses the plurality of detection results to produce a single detection decision.

56. (Previously Presented) The system according to claim 43, further comprising:

an event storage, in which detected occurrences of temporal semantic events are stored;

an events statistics extractor to compute statistical information about the detected occurrences; and

an event statistics storage unit to store the statistical information.